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## Sewing Modern Fabrics

Cooperative Extension South Dakota State University

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FS 401

# Sewing Modern Fabrics

Cooperative Extension Service  
South Dakota State University  
U.S. Department of Agriculture



# Sewing Modern Fabrics

Never before has such an exciting array of fabrics tempted a person to get out her sewing machine and whip up something new and different. Old, familiar fibers and fabrics have been given new finishes and interesting textures. New fibers, developed in laboratories all over the world, have found their way into entirely new fabrics.

Do you ever look at a piece of fabric and see a lovely suit or coat, a beautiful dress or a child's jumper? When shopping for fabrics, do you want to touch and feel a fabric to see what it will do and how it will behave? Do you sense personality in fabrics? One says, "Tailor me, I'm all business." Another is strictly the party-type.

Fabrics can be bold, daring, subtle, casual. Some are for draping, others take to pleats. Some are sophisticated, others demure. Selecting the most appropriate fabric for a specific garment is a challenge—it's the key to the perfect costume.

Many of today's fabrics require special techniques in choice of pattern (design), cutting, adjustment of sewing machine, type of thread, size of needle and method of pressing. In general, good habits and procedures for home sewing—cutting on grain, stay stitching, alternate sewing and pressing (with the grain), and finishing seams to reduce raveling and bulk—should be done.

Consider the color, texture and design of the fabric. Texture, along with the fiber content, has the greatest bearing on sewing techniques.

## TEXTURE

## FABRICS

rough or coarse	hopsacking, tweed, burlap
smooth	chambray, broadcloth, poplin
nubby	bouclé, tussah
bulky	melton, coatings, wide-wale corduroy
soft	flannel, interlock knit, challis
clinging	jersey, knits
sheer	voile, chiffon, dotted swiss
stiff	organza, taffeta
shiny	ciré, satin, brocade, lame, chintz, vinyl
pile or napped	velvet, corduroy, fake fur, velour, suede-like fabrics
dull	oxford cloth, felt, denim

Texture refers to the way fabrics react to touch, light and handling. Textures are rough or smooth, coarse or fine, dull or shiny.

Current fashion, intended use of the garment design, and the body size of the wearer, as well as sewing ability of the individual, influence choice of texture. The inexperienced sewer will have the best results with a firm, smooth fabric, such as a double knit, chambray, flannel or sailcloth, while the expert may be equally successful with stretchy, fine, soft or bulky fabrics.

## Special Fabrics

### BONDED FABRICS

This group includes all fibers and weaves or knits generally bonded to an acetate or nylon tricot or to a woven cotton backing. The purpose of bonding is to give stability and body to loosely woven fabrics. It also adds warmth.

Look for evenly bonded lengthwise edges and straight-grain crosswise bonding of the face fabric.

Choose a garment design with simple lines and few seams. Use facings and interfacings of lightweight fabric. Many times the face fabric separated from the backing will make a less bulky and more desirable facing. Grade enclosed seams; finish other seams only if there is a tendency to roll or fray. Edgestitch, zig-zag, or bind with tape if necessary. A jacket or coat made from a bonded fabric should be lined.

Buttonholes may be bound or machine-made, depending on the type of garment. If the outer fabric is bulky, remove the backing for the lips of a bound button hole.

A tailor's hem is most suitable for bonded fabric. Pink the free edge, stitch close to the edge with the shortest length machine stitch, and hand-hem with a catch stitch below the hem edge between hem and garment (inside hemming).

### CORDUROY, VELVET, VELVETEEN

The pile structure of corduroy and velvet demands special handling. Follow cutting layout "with nap." Choose a pattern with few pieces.

A richer color effect will be obtained if the pile runs up. Avoid a design that calls for top-stitching. Line or face with a smooth, finely woven fabric of matching color to avoid bulkiness. Hand basting will keep fullness from shifting.

Seams will require some type of finish. Do not pink! Do not turn and stitch the hem edge; instead, encase the edge with seam tape. For a skirt that has considerable flare, use matching color bias fabric or tape.

Avoid buttonholes—use loops, snaps, or zippers sewed in by hand, especially on velvet.

Never touch the face of fabric with an iron. Use a piece of the pile fabric for a press cloth with pile placed next to pile.

### DIAGONAL WEAVES

Diagonal weaves are usually found in suitings and coat fabrics. They call for designs with few seams. Finishing details will be determined by weight and closeness of the weave. Some knits have a pattern resembling a diagonal weave.

### FAKE FURS

Follow techniques that are given for corduroy and velvet. Work the pile out of seams with the point of a needle. Wherever suitable, face with a smooth fabric of appropriate character. Seams generally do not require a special finish. Slash darts and press flat. Buttonholes may be machine-made or bound, using wool or other smooth fabric for the lips.

### FAKE LEATHER

Choose a design with straight lines and few seams and darts when using fake leather. Do not plan on buttonholes without making a trial sample first. Line and face with taffeta, polished cotton, or a blend, and top or understitch to give a sharp edge. Use single or double top-stitching to keep seam allowances flat. Slash and flatten darts.



## JERSEY

Jersey is a tubular single knit. Before laying out the pattern, open the tube by cutting along a rib. Straighten the ends of the fabric with a square.

Do not purchase printed jersey with a straight crosswise design unless the design runs at right angles to the lengthwise rib, not the fold.

Select a simple pattern with few seams. Avoid circular or bias-cut skirts. Jersey is adaptable to draping or slightly eased designs, and "gives" easily with body movements.

## DOUBLE KNITS

Double knit is especially suitable for tailored clothes. Avoid circular and bias cuts. Follow a lengthwise rib as a guide for "straight" grain.

To reinforce shoulder seams or underside of kimono sleeves, pin preshrunk tape over the seamline before stitching and include it in the seam. Sew with a very fine or ball point needle.

Grade seams in collars, facings, etc. In general other seams do not require a special finish. However, if there is a tendency to roll, make line of stitching  $\frac{1}{4}$  inch from edge or zig-zag close to edge.

Buttonholes may be bound or machine-made. In either case, stabilize the buttonhole area by pressing a small, oval-shaped piece of very lightweight fusible interfacing to the wrong side of the garment section.

To hem, stitch  $\frac{1}{4}$  inch from cut edge and catch-stitch to garment, or use a tailor's hem. Do not turn hem edge.

If a bias binding is called for, cut across on crosswise width.

## LACE (NOT BONDED)

Lace may be heavy or fine and flimsy. Choose a simple design with few seams. Lace is cut with the design, since there is no grain line.

Most lace garments require backing and/or lining. Backing may be transparent, sheer or opaque. Lining is opaque.

Tailor's tacks or thread basting are suitable marking techniques.

Lay strips of tissue paper under seams to prevent fine lace catching on feed dogs. Darts are double stitched  $\frac{1}{8}$  inch apart and trimmed close to second stitching. Hems are faced with a sheer fabric. Avoid self facings. Avoid buttonholes whenever possible. Zippers are applied as usual with the last step (outside stitching) done by hand.

## LEATHER AND SUEDE

Patience and care are required in handling any natural skin. Pin or needle marks are permanent, so make sure the pattern fits precisely before cutting the leather.

Select uniform skins for the fronts and sleeves. The pattern pieces must fit the irregular shape of skins. Simple designs are a must, because collars, cuffs, enclosed edges, and complicated construction lines create problems.

Cut one layer at a time. Place pattern piece on the wrong side of the leather and secure with tape. Mark with clay chalk or a lead pencil.

Use pre-shrunk seam tape to reinforce seams. Trim seams to  $\frac{3}{8}$  inch and round all corners.

## PERMANENT OR DURABLE PRESS

These fabrics are also described as easy-care or drip-dry. Choose an uncomplicated design with self-facings and

few seams. Avoid grainline seams, because they have a tendency to pucker.

Select trims, linings, facings, interfacing, etc. that are also "easy care."

Arrange pattern to avoid any creases or folds in the fabric.

Be sure the grainline is straight before you buy the fabric. "Off-grain" durable press fabric cannot be straightened. Avoid plaids and stripes that are printed "off-grain."

Other sewing techniques for durable press include:

- Top stitch or understitch for sharpness.
- Cut on bias where fabric design allows, since straight seams pucker more than bias.
- Pre-shrink zipper, seam or bias tape, lining, and interfacing by washing them several times in warm water.
- Ease zipper into placket area.
- Use a round-hole throat plate, or put masking tape over the hole of a zig-zag plate.
- Sew at a moderate speed.
- Finish seams according to their tendency to fray.

## PLAIDS AND STRIPES

There are two types, **balanced** and **unbalanced**. A balanced or even plaid or stripe is equal in pattern and spacing. An unbalanced plaid or stripe varies in pattern and spacing and requires special preparation in laying and cutting. Choose a design with few seams.

Plaids require extra yardage for matching:

- small scale— $\frac{1}{8}$  yard extra
- medium scale  $\frac{1}{4}$  to  $\frac{1}{2}$  yard extra
- large scale—full yard extra

An unbalanced plaid or stripe must be cut following the "with nap" layout. Match corresponding notches on the same part of the plaid or stripe.

Stripes or plaids should match:

- at notches front and back in a set-in sleeve
- at shoulder notches on kimono sleeve
- at shoulder seam
- center front seam and side seams if possible
- where collar and yoke meets bodice, unless they are bias
- patch pockets, unless they are cut on the bias

## BEADED AND/OR SEQUINNED FABRICS

These fabrics are produced in different ways, on either a knitted or woven backing fabric. Each piece influences its own handling.

Choose a simple pattern that will compliment the fabric. Avoid set-in sleeves. Make a test garment of muslin first.

Use "old" shears for cutting. Remove beads or sequins from seam allowances and darts. Stay stitch all edges. Mark with tailor's tacks.

Use a zipper foot for all seams, resting the foot only in the seam allowance. Use stitch length tension and needle size suitable for the base fabric.

Press with extreme care using a "low" iron setting and dry heat. Use only the tip of the iron.

Line the garment to prevent skin irritation. Use a facing for the hem or remove all decoration from hem allowances. Cut all facings from a lining-weight fabric.

## METALLIC FABRIC

Metallic fabrics are considered to be any fabric containing some metallic threads. They may be woven or knit, soft or crisp, shiny or dull.



An underlining will add comfort and prevent thread breakage; avoid using interfacing.

Follow a "with nap" pattern layout. Pin within the seam allowance. Cut with "old" shears, and mark with tailor's tacks.

Sew with a fine needle and fine, smooth thread. Prevent skin irritation by finishing all seams or lining the garment. Press lightly with a warm iron. Closures may be buttons and buttonholes or zippers. Avoid bound buttonholes on fabrics that ravel.

### SHEER FABRICS

Sheers may be crisp or soft, but they all require extra care. Lay fabric over a sheet-covered cutting surface to retain grainline. Snip the selvage at frequent intervals since it is more tightly woven than the body of the fabric.

Use fine silk or ball point pins. Cut with very sharp shears. Mark with tailor's tacks. Hand baste rather than pin sections together.

Most sheers require a backing or an underdress. If the fabric is a solid color some sections may be doubled to avoid edge finishing.

Make french seams wherever possible. Omit facings at neck, sleeve and opening edges and substitute a matching or contrasting colored single or double bias binding. These techniques may also apply to a fully-lined section.

Avoid buttons and buttonholes, and insert zipper by hand. Use deep or rolled hems. Press with a dry iron.

### STRETCH FABRICS

Whether knitted or woven, these fabrics may be used for comfortable, well-fitting swimwear, lingerie, pants and jumpsuits.

Spread the fabric taut, then let it relax before cutting. Use the same size pattern as for regular fabrics. Cut with very sharp shears to prevent stretching.

Machine stitch with sharp (#11) or ball point needle, and use polyester or cotton-covered polyester thread. Lay pre-shrunk seam tape over seamlines where no stretch is desired.

Machine stitch 1/4 inch from edge to prevent seam allowance from rolling.

Apply zipper in regular manner, sewing last step by hand.

Buttonholes may be bound or machine made, placed at right angles to the direction of the fabric stretch. Apply small ovals of lightweight fusible interfacing under each buttonhole.

Make tailor's hem (inside). Be sure to stitch loose enough to allow fabric to move. DO NOT use hem tape.

Elasticized edges are often used as substitute for casings to finish sleeve, neck, waist or leg edges. Use either exposed or enclosed elastic finish.

### VINYL

Vinyl fabrics are available in a number of forms. All require simple, straight lines. Raglan sleeves are preferred.

Mark on wrong side with pencil or chalk.

Welt seams or top-stitched seams on collar and facing edges are preferred.

Buttonholes may be bound or machine-made. If machine-made, always use a woven fabric as a stay

between garment and facing.

Zippers, loops or snaps may be used as closures.

Pin and needle holes are permanent, so pin within the seam allowance and be sure the pattern fits before cutting.

Do not back-stitch darts; instead, stitch off the fabric and knot the two threads as one. Slash darts and finger-press edges open. Use fabric glue or rubber cement to flatten seams. Catch hem to backing only or glue a 1 inch hem in place.

### SUEDE-LIKE FABRICS

The suede effect is achieved by brushing or flocking. The fabric may be in sheet form as Ultra Suede\*, woven or knit. Choose a simple design with few seams.

Top stitch to achieve flatness. Reinforce button and buttonhole areas with interfacing. Conventional methods of sewing and finishing may be used. Flat construction is appropriate on many suede-like fabrics, but not all.

### INTERFACING

The purpose of interfacing is to:

- Preserve shape
- Add body and/or crispness to certain parts of garment
- Reinforce
- Improve appearance

Interfacing may be woven or non-woven, fusible or non-fusible. Interfacings are always equal to or lighter in weight than the garment fabric.

Suitable fabrics include lawn, nylon net, muslin, hair canvas, percale, tulle, and special tradenames including Veriform\*, Stayshape\* Suitshape\* Reemay\* Featherweight Pellon\* Add Shape\*.

\*Use of tradenames does not imply endorsement.

### Where Do You Buy?

Buy your fabric from a store which stands behind its merchandise—the store that thinks of tomorrow's customers while ringing up the cash register today!

Information given on the end of the bolt generally is reliable. However, there are instances when fabric arrives at the retail level in a bundle and then rolled onto a bolt or tube. In this case the information you find may or may not apply to the fabric at which you are looking. Always ask!

Examine fabric carefully for flaws in dyeing, knitting or weaving, color fastness, and straightness. Many easy-care fabrics insisted on today are achieved through a resin-treating process; the fabric is subjected to high temperatures to seal the threads into a permanent position.

These finishes are wonderful, but there are disadvantages. If the fabric was not perfectly aligned in both directions, the finished product will be permanently off grain. So, beware when buying any fabric, but especially one which requires matching, such as a plaid, check or stripe. Even though these are woven from previously dyed yarns, they may be skewed or bowed in the resin-treating process. If the warp and filling yarns are set at other than right angles, there is no remedy. Only extreme care in laying out the pattern can counteract this, and additional yardage will be required. Whenever possible, fabric should be cut on a line from which a thread was drawn. This will call immediate attention to off-grain fabric design.



## Stitching Recommendations

Fabric	Thread	Sewing Machine Needle Size	Stitches per inch/cm
very lightweight (chiffon, fine lace, net, organdy, etc.)	mercerized cotton #70-100 cotton covered polyester 100% polyester silk A	9, 11, fine or ball point	18/20
lightweight (chambray, dotted swiss, voile, jersey, crepe, etc.)	mercerized cotton #60, 70 cotton covered polyester 100% polyester silk A	11, fine or ball point	12/-16
medium lightweight (gingham, challis, satin, cut velvet, etc.)	mercerized cotton #60 cotton covered polyester 100% polyester silk A	11, 14 or ball point	12/14
medium weight (flannel, pique, corduroy, double knits, boucle, etc.)	mercerized cotton #50, 60 cotton covered polyester 100% polyester silk A	14 medium	12/14
medium heavyweight (terry, burlap, gabardine, vinyl coated fabrics, fake fur, etc.)	mercerized cotton #40 cotton covered polyester 100% polyester silk A	14, 16 coarse	10/12
heavyweight (double-faced wool, ticking, drapery fabrics, sailcloth, etc.)	mercerized cotton #24, 30, 40 cotton covered polyester 100% polyester silk A heavy duty mercerized button and carpet	16 coarse wedge	6/10
very heavyweight (canvas, work denim, wide-wale corduroy, etc.)	mercerized cotton #8, 16, 20 button and carpet	coarse	6/8

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